

REMARKS

Claims 32-57 and 77-81 are pending in the application. Claims 37-57, 77, and 78 have been withdrawn from consideration. Therefore, claims 32-36 and 79-81 are at issue.

Applicants wish to point out an inadvertent error in the Office Action. Although the Office Action refers to pending claims 32-81, claims 58-76 were cancelled in a preliminary amendment. Therefore, claims 32-57 and 77-81 are pending in this application.

Applicants note that the nonpatent publications are not available to the examiner. Accordingly, applicants enclose a copy of the nonpatent publications listed in the Information Disclosure Statement of October 10, 2003. Applicants request that the examiner acknowledge receipt and consideration of the enclosed publications in the next correspondence from the examiner.

The specification is objected to for failing to contain an abstract. Although applicants' file contains an abstract, it either was inadvertently omitted when filing the application or misplaced at the Patent Office. Applicants, therefore, enclose a copy of the abstract, on a separate sheet, filed in U.S.S.N 10/619,854, of which this application is a divisional. Applicants also amended the specification to provide an updated cross reference to related applications.

Claims 32-36 and 79-81 stand rejected under 35 U.S.C. as being unpatentable over WO 96/15180 (WO '180) in view of WO 97/16492 referred to and discussed

in the Office Action and herein as Ishizaki et al. U.S. Patent No. 6,001,911 ('911)) under 35 U.S.C. §103. This rejection is based on the contention that WO '180 discloses an unneutralized acidic water-absorbent resin and an unneutralized basic water-absorbent resin, and that the '911 patent discloses preparation of a sheet-like absorbent material having a superabsorbent resin deposited on a substrate. For the reasons set forth below, it is submitted that this rejection is in error and should be withdrawn.

Prior to discussing the cited references, it should be noted that the present claims are directed to an article comprising a sheet material comprising an unneutralized *acidic water-absorbing* resin and an unneutralized *basic water-absorbing* resin, made by depositing particles of each resin on a support surface, then compressing the particles to form a water-absorbent sheet (claim 32). The sheet can further contain a second neutralized acidic water-absorbing resin (claim 81) and/or a bonding expedient (claim 79). An important feature of the present invention is that *both* the acidic and the basic resins are *water absorbing*, i.e., are capable of swelling and absorbing aqueous media. See specification, page 17, lines 27-29.

The polymer blend of the WO '180 reference is substantially different from the blend of acidic and basic water-absorbing resins recited in the present claims. WO '180 discloses a combination of (1) an unneutralized anionic superabsorbent (i.e., an unneutralized acidic water-absorbent resin) and (2) an anion exchanger. See WO '180, abstract, and page 3, lines 4-

10. The anion exchanger of WO '180 is not a basic water-absorbing resin, but is a highly crosslinked, nonswelling, and nonabsorbent ion exchange resin. See specification, page 9, lines 6-9.

WO '180 more fully discloses the ion exchange resins at page 6, line 18 through page 9, line 6. The disclosed ion exchangers are well known, and especially are known not to absorb liquids and swell. These resins are used for a reversible exchange of cations or anions (WO '180, page 6, line 34 through page 7, line 1), not to absorb large quantities of water. The ion exchange resins disclosed in WO '180 are highly cross-linked and cannot absorb water, as evidenced by the commercial ion exchanger resins discussed in WO '180. In fact, absorbing water and swelling is disadvantageous for an ion exchange resin. Ion exchange resins are designed to have water flow through the resin bed and exchange ions. A faster flow increases efficacy in treating water. Absorbing water and swelling would retard the flow of water through the resin bed and therefore is discouraged.

The present claims do not contain an ion exchange resin of the type disclosed in WO '180, but contain polymers having a basic functionality and that are capable of absorbing large quantities of water, e.g., *lightly crosslinked* poly(vinylamine) and *lightly crosslinked* poly(dimethylamine ethyl(acrylamide)), as disclosed in the present specification.

Therefore, the combination of an acidic and a basic water-absorbing resin recited in the present claims is substantially different from the combination

of an acidic water-absorbing resin and nonabsorbent ion exchange resin disclosed in WO '180. WO '180 fails to teach or suggest any basic water-absorbing resin, and fails to consider or address using a basic water-absorbing resin as a substitute for an ion exchange resin.

Accordingly, due to the substantial differences between an ion exchange resin and a lightly crosslinked basic water-absorbing resin, WO '180 provides no motivation or incentive for a person skilled in the art to substitute an unneutralized basic water-absorbing for an ion exchange resin. It is the present inventors who first discovered that the use of a blend of an unneutralized acidic water-absorbing resin and an unneutralized basic water-absorbing resin provides improvements over resins and blends in absorbing large quantities of aqueous fluids and demonstrating excellent fluid permeability.

The '911 patent does not overcome the deficiencies of WO '180. The '911 patent merely teaches the preparation of a sheet like absorbent material from a superabsorbent resin. The '911 patent fails to teach any blend of resins, but merely teaches the formation of an absorbent sheet from an acidic water-absorbing resin.

The most that can possibly be gleaned from a combination of WO '180 and '911 patent is forming the blend of WO '180 into an absorbent sheet using the method of the '911 patent. However, this combination still fails to teach or suggest a substitution of an

unneutralized basic water-absorbing resin for the nonabsorbent ionic exchange resin of WO '911.

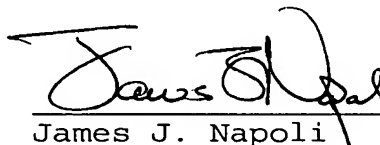
In summary, the combination of WO '911 and the '911 patent fails to render claims 32-36 and 79-81 obvious under 35 U.S.C. §103. It is submitted, therefore, that the claims are in proper form and scope for allowance. An early and favorable action on the merits is respectfully requested.

Should the examiner wish to discuss the foregoing, or any matter of form in an effort to advance this application toward allowance, the examiner is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

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